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REACTOR AREA III

KYSHTYM ATOMIC ENERGY COMPLEX, USSR

DECLASS REVIEW by NIMA/DOD

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REACTOR AREA III
KYSHTYM ATOMIC ENERGY COMPLEX, USSR

SUMMARY

An analysis of all photography of Reactor Area III, Kyshtym Atomic Energy Complex reveals that the area has apparently not been abandoned and that some of the facilities are either in use or are being kept in a stand-by condition. This conclusion is based on photographic evidence which reveals vehicular traffic on the road leading to the reactor area, a resumption of railroad activity, and the construction of new buildings and additions to older ones. Efforts to determine steam and pipeline use within and adjacent to the reactor area failed to reveal any evidence either confirming or denying the use of the identified pipelines. Substation E, located in the reactor area, appears to contain a full complement of equipment. Pumphouses associated with the reactor area appear to be in operation. Although vapor has never been seen coming from the 2 stacks, vapor has been seen being emitted from a small vent probably associated with Stack A.

INTRODUCTION

Reactor Area III of the Kyshtym Atomic Energy Complex (55-59N 60-43E) is located near the northeast perimeter fence of the main production area, approximately one nautical mile (nm) from the southern shore of Lake Kyzyltash (Figures 1 and 2).

25X1 Recent good quality [ ] photography now permits an updating of previous reports 1-7/ and the revision of some measurements.

Measurements: All measurements have been made by the NPIC Technical Intelligence Division with the exception of those designated by an asterisk, which were made by the IAS project analyst. The NPIC/TID measurements are considered to be accurate within ± 5 feet or ± 5% whichever is greater.

DESCRIPTION

ACCESS AND SECURITY

The only entrance for vehicular traffic into Reactor Area III is located in the middle of the northwest security walls. This entrance is flanked on both sides by guard houses. The easternmost guard house (Figure 5) is a single-story hip-roofed building approximately 85 [ ] in size. The second guard house was originally identical to the first, but photography of [ ] revealed that the second guard house (Figures 5 and 9) has been modified by the addition of a [ ] extension. This addition, completed between [ ] extends in a northwest direction, outside of the secured area. A probable bus station is located adjacent to the main access road to the reactor area, outside of the secured area.

The security for the reactor area is provided by a solid fence completely surrounding the approximately 80* acres which comprise Reactor Area III. Paralleling the solid fence is an inside wire fence, and located at strategic positions along this double fence system are 6 guard towers.

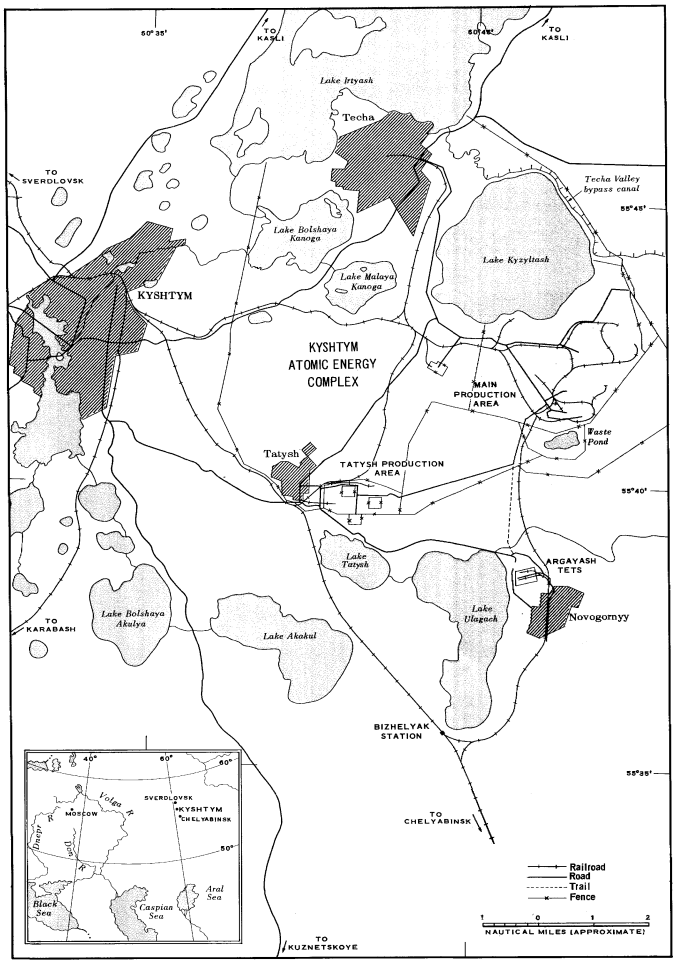

FIGURE I. LOCATION MAP

PROBABLE REACTOR BUILDING

The largest and most prominent feature of Reactor Area III is the earth-covered probable reactor building (Figure 3). Recent photographic coverage confirms that the material used as a covering for the probable reactor building is earth. Vegetation can be seen growing on the slopes of the mound and some slight erosion can be observed on the southeastern side. Vehicle tracks can also be seen on the top of the probable reactor building.

The earth covering precludes a detailed interpretation of the actual structure under the mound, but an approximate configuration can be determined by analyzing the contours of the covering. The structure under the earth covering is multi-level, L-shaped, and measures approximately [redacted] feet overall (Table II). The highest portion of this building is the southeast section situated above the railroad tracks that enter through the southeast side of the mound. This high-bay section, [redacted] probably equates to the reactor hall sections of the reactor buildings in Areas I and II at Kyshtym. Table I shows the comparison in size between the reactor hall sections of Area I and II to the probable reactor hall section in Area III.

TABLE I
COMPARISON OF REACTOR HALL SIZES, AREAS I, II AND III

Area I

Reactor Hall, Reactor Building IA
Reactor Hall, Reactor Building IB

Area II

Reactor Hall, Reactor Building IIA
Reactor Hall, Reactor Building IIB

[redacted]

Area III

Reactor Hall, Probable Reactor Building [redacted] (height unknown)

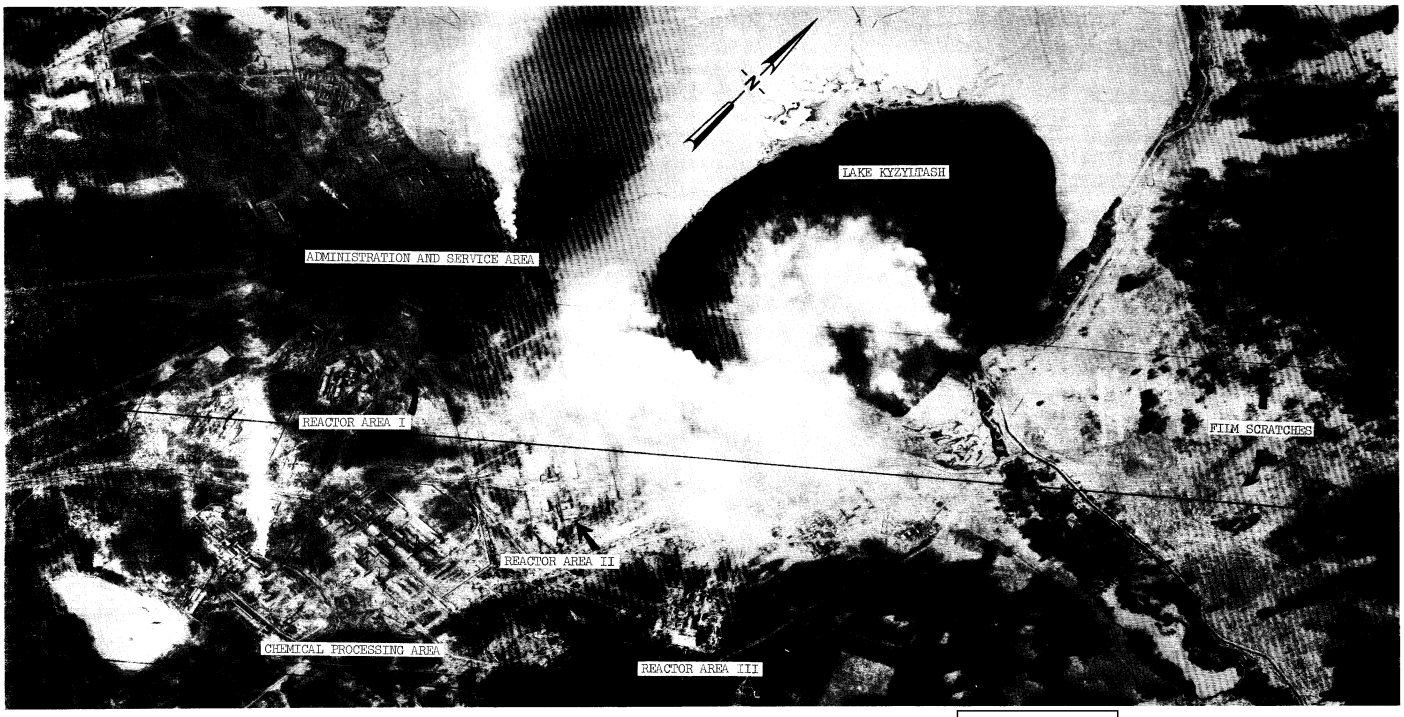

FIGURE 2. MAIN PRODUCTION AREA - KYSHTYM ATOMIC ENERGY COMPLEX - [redacted]

Extending in a southwesterly direction from the probable reactor hall section is a narrow section, equally as high as the probable reactor hall section and measuring [redacted]. This narrow section is approximately centered over a lower section which is [redacted] feet in size. The remainder of the earth-covered structure is an irregularly shaped area approximately [redacted] feet in overall size with an elongated northwest extension [redacted] feet. The extension is used as a covered railroad entrance.

A number of fans, air-intakes, and vents are visible on top of the probable reactor building (Figures 3 and 4), but at no time have they been observed emitting vapor or steam.

STACKS

There are 2 stacks associated with Reactor Area III. Stack A (Figure 3) is approximately 195 feet tall, and measures [redacted] in diameter (outside) at the base and [redacted] in outside diameter at the top. Stack B (Figure 3) is also 195 feet high with an outside base diameter of [redacted] and an outside top diameter of [redacted] Stack A is located approximately 185* feet northwest of the probable reactor building, while Stack B is [redacted] to the north of the probable reactor building. Both stacks have hexagonal bases and are possibly associated with 2 pairs of nearby unidentified objects. These objects (Figures 3 and 5) are situated in

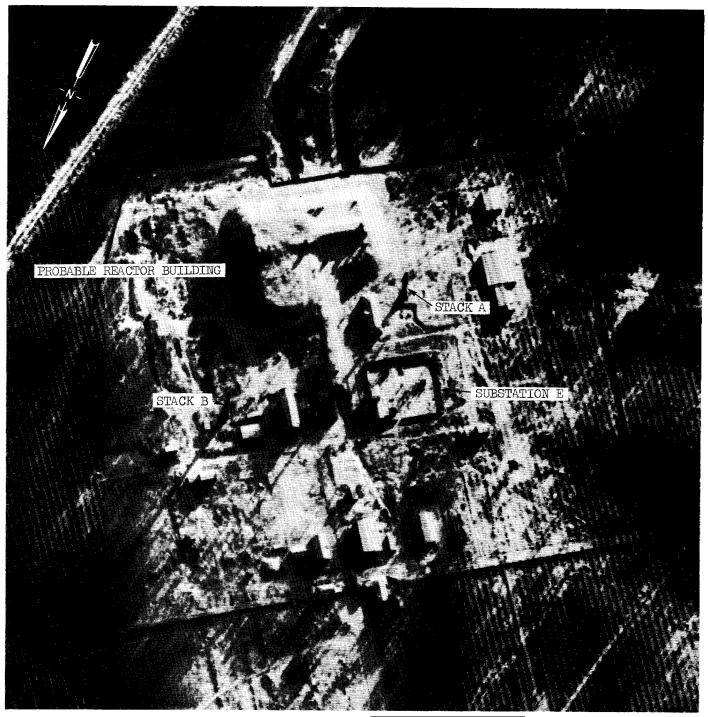

FIGURE 3. REACTOR AREA III - [redacted] - 10X

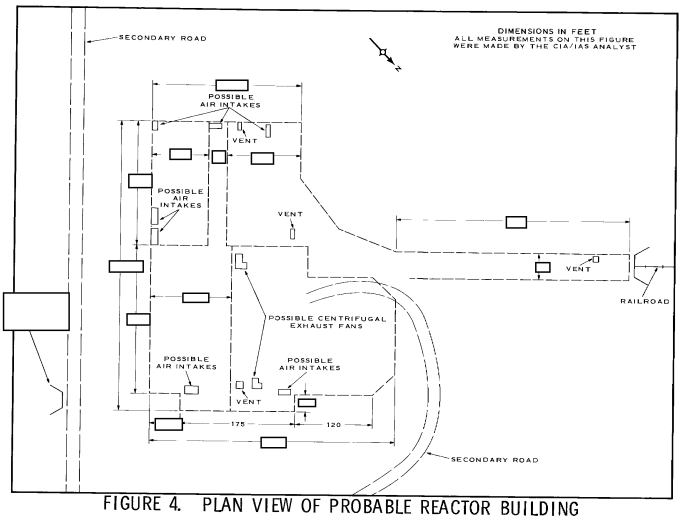

FIGURE 4. PLAN VIEW OF PROBABLE REACTOR BUILDING

similar depressions, with each depression (there are 2, one with each stack) containing 2 rectangular objects which are approximately [redacted] in size. These depressions and the rectangular objects within them may be connected with an underground exhaust and filter system for each stack, although Stack B is 250* feet from the depression believed to be associated with it. A vent that was seen emitting vapor on [redacted] is located adjacent to the depression associated with Stack A.

OTHER FACILITIES

A T-shaped probable administration building (Figure 5, Item 1) is located northeast of the road leading from the main entrance to the center of the reactor area. The bar portion of this building is a 2-story structure with a hip roof, while the stem section is one story. Directly behind this building is an earth-covered square building approximately [redacted] feet in size. A probable entrance can be seen in the side of the earth-covering as well as a vent on top of the building. This building appears to be a possible personnel shelter.

Opposite the probable administration building on the southwest side of the road is a rectangular, bilevel building (Figure 5, Item 2). This building is a probable shop/maintenance facility for the reactor area. Southwest of this building and parallel to the railroad line is a newly completed warehouse (Figure 5, Item 11). This building was constructed between [redacted] An individually secured building (Figure 5, Item 3) is located adjacent to one of the railroad sidings in the northwest portion of the reactor area. The railroad siding and building are secured by a wire fence and are probably used for storage of valuable or dangerous materials. There is no evidence of open storage within this secured area.

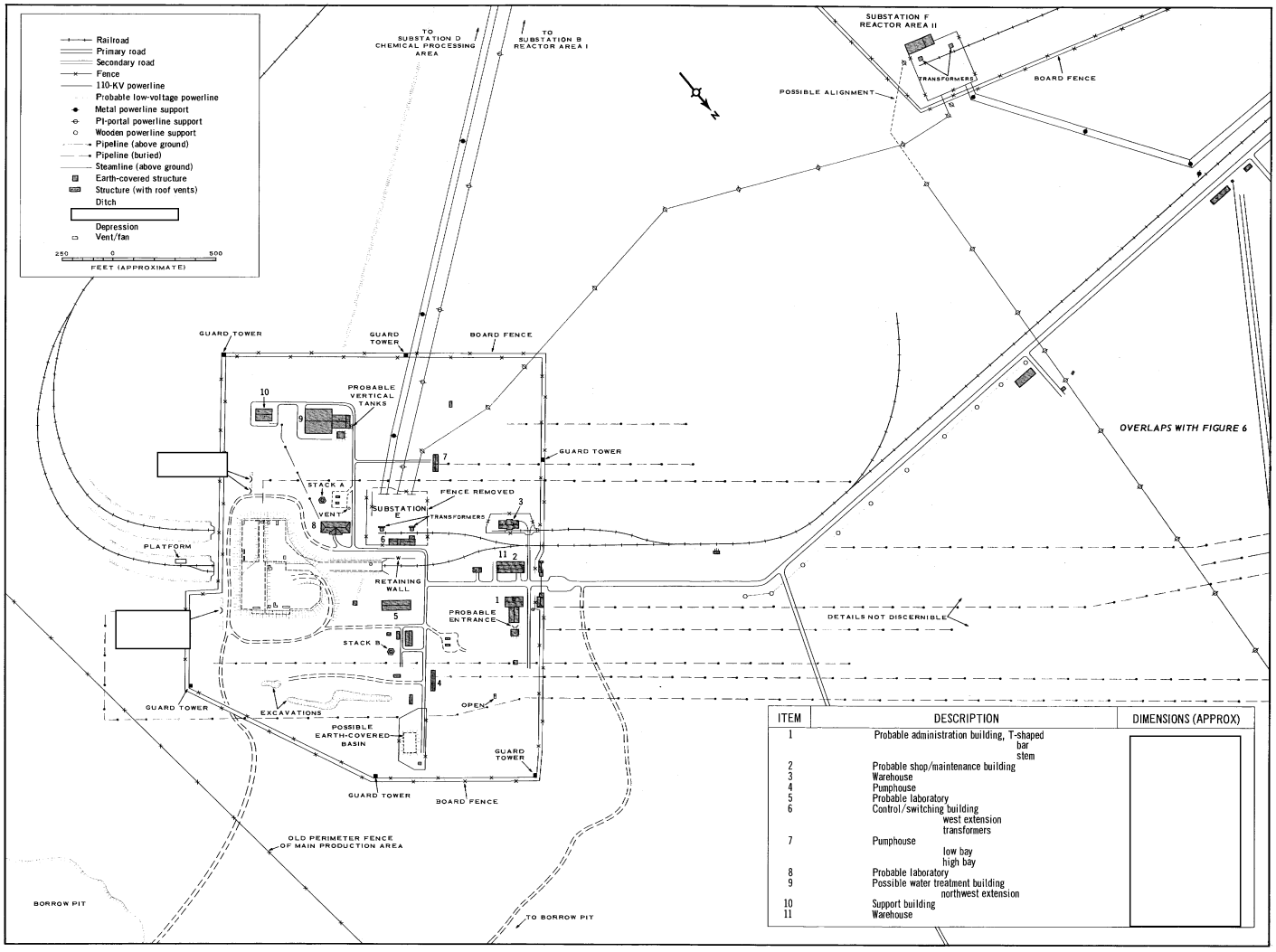

FIGURE 5. LAYOUT OF REACTOR AREA III

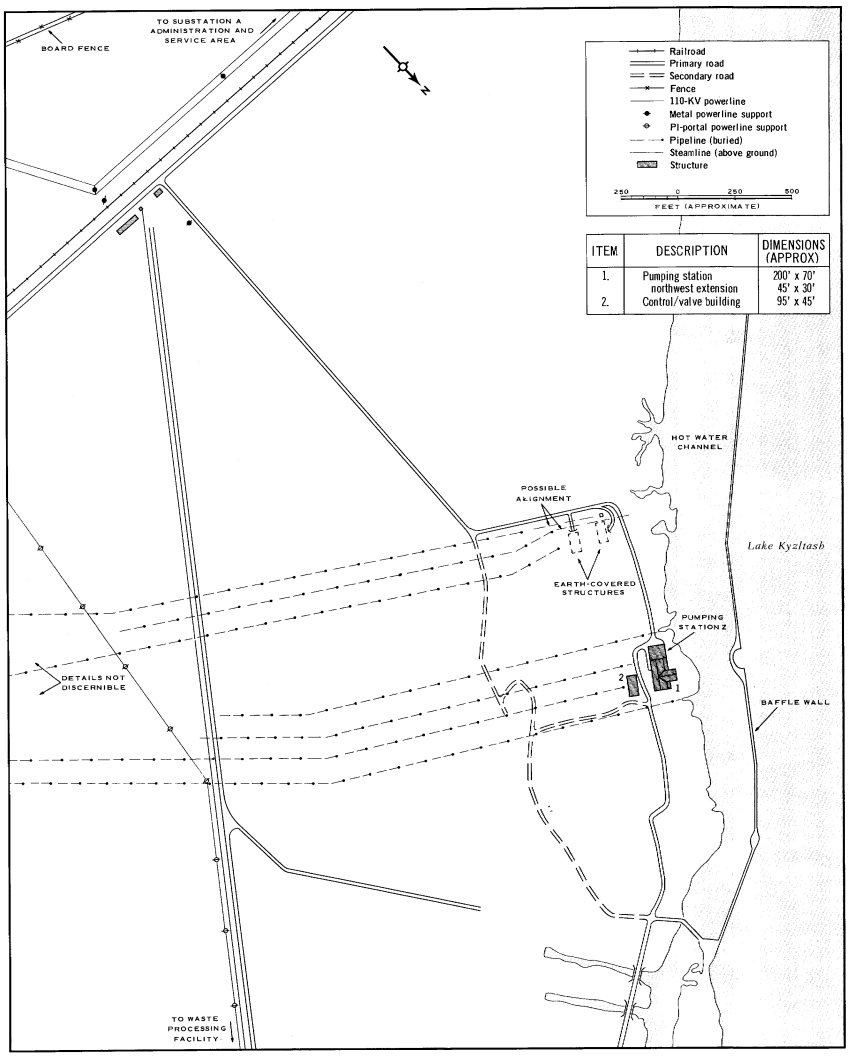

FIGURE 6. LAYOUT OF PUMPING STATION Z

A probable 2-story laboratory building (Figure 5, Item 5) is located north of the probable reactor building, while a second laboratory-type building (Figure 5, Item 8) is located between the earth-covered probable reactor building and Substation E. Southwest of the probable reactor building is a possible water treatment building (Figure 5, Item 9). Adjacent to the northwest end of this building are 2 vertical tanks, approximately [redacted] in diameter. A square, earth-covered structure, similar to the previously described possible personnel shelter is located on the northeast side of the possible water treatment building. 25X1

PIPELINES

Reactor Area III receives its water supply from Pumping Station Z (Figure 6, Item 1) which is located approximately one nm northwest of the reactor area on the shore of Lake Kyzyltash (Figure 7). Originating at this station are 4 pipeline traces (Figure 6) which lead toward Reactor Area III. Only the two most northern traces can be followed for the entire distance to the reactor area. Numerous areas of earth scarring prevent a detailed analysis of the other traces. The northernmost trace, upon entering the reactor area enters a small, individually secured area which contains a possible earth-covered basin and a small valve house. The trace can be seen leaving this area and terminating near the southern security wall. Although this trace cannot be observed connecting with any specific structure or building, it does appear to be inline with a probable tunnel entrance to the probable reactor building.

The second trace, which can be followed for its entirety, is parallel to the northernmost trace, and can be followed from the control/valve building (Figure 6, Item 2) at Pumping Station Z to the pumphouse (Figure 5, Item 4) located north of the probable reactor building. This pumphouse has been observed with portions of the roof free of snow while other structures were still snow covered. This would seem to indicate that the pumphouse had been operating and that hot exhaust was melting the snow.

Approximately 475* feet south of Pumping Station Z are 2 earth-covered rectangular structures (Figures 6 and 7). Originating near these two structures are 3 additional pipeline traces which appear to lead to Reactor Area III. The terminal point of these traces cannot be determined due to extensive earth-scarring in the area. Visible near the northwest corner of the reactor area are 3 more pipeline traces, one of which appears to originate near the probable reactor building's (Figure 5) southwest side. The second of these traces originates at a pumphouse (Figure 5, Item 7) and can be followed for only a short distance beyond the security walls.

The third trace and most southern of the pipeline traces visible near the reactor area, can be seen for a short distance near the northwest security walls. By projecting the visible trace in a straight line, it appears that the possible water treatment building would be inline with the trace.

It is felt that a previously identified steam line connecting Reactor Area III to Reactor Area II is not a pipeline, but is a partially filled ditch. The 3 probable buried pipelines from Reactor Area II, which have been previously identified as entering Reactor Area III on the west corner cannot be confirmed as pipelines. This is also true for the 2 probable buried pipelines extending from the southwest corner of Reactor Area III.

No melted snow from hot water pipelines was evident between the reactor area and Pumping Station Z or within the reactor area itself.

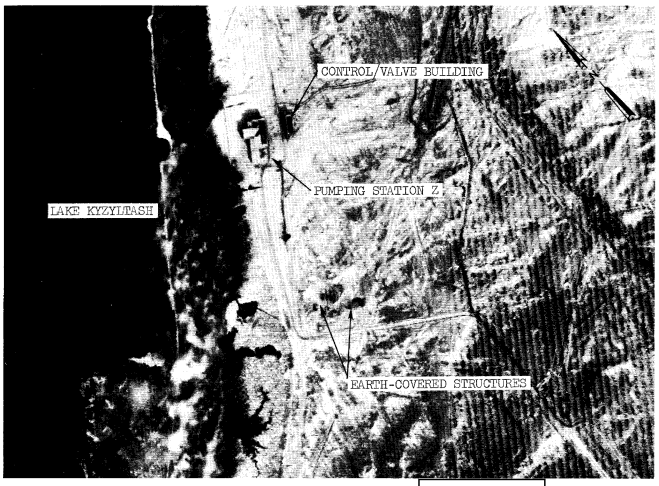

FIGURE 7. PUMPING STATION Z - [redacted] - 20X

FIGURE 8. REACTOR AREA III - [redacted] - 20X

RAILROAD ACTIVITY

The apparent resumption of railroad movement in and around Reactor Area III suggests that the area has not been abandoned. Recent high quality photography now permits a more detailed analysis of the track systems serving the reactor area. Three tracks approach the probable reactor building from the southeast and enter the structure through two revetted entrances located outside of the security fences (Figure 9). The westernmost track probably terminates inside the building.

Two tracks enter the probable reactor building through the easternmost revetted entrance. One of these tracks probable terminates within the building, while the second track continues through the building and emerges through a tunnel-like structure into the secured portion of the reactor area. This track continues through the reactor area and exits the secured area, adjacent to the road entrance. Branching from this track are two sidings, one of which serves Substation E, while the other terminates adjacent to an individually secured building (Figure 5, Item 3). Farther to the northwest the track again branches forming a curved siding.

Observed for the first time in [redacted] are 3 empty gondola-type railroad cars, which are parked on the curved siding northwest of the reactor area. Again on [redacted] the 3 cars are evident as are several boxcars on the easternmost siding in the southeast side of the reactor area. The railroad cars remained in these positions until [redacted] when they were apparently moved. Since [redacted] successive missions have shown railroad cars in various positions in and around the reactor area.

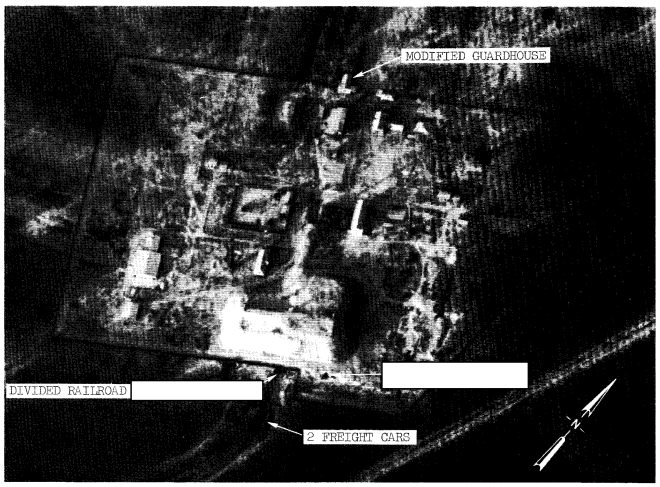

FIGURE 9. REACTOR AREA III - [redacted] - 20X

ELECTRIC POWER

The only electric power facilities observed within Reactor Area III are at Substation E. This substation has been modified since [redacted] The modification appears to have been confined to a realignment of the solid fence which surrounds the substation. The substation contains a standard Soviet control building (Figure 5, Item 6) with low-voltage switching. Two transformers are in place, each of which measures [redacted] in size. The associated equipment appears to be in place and the substation is probably in condition to operate.

A new interpretation of the 110-kv powerlines extending from the substation is presented in Figure 5. It is now believed that only one single-circuit 110-kv powerline extends from Substation E to Substation F in Reactor Area II. This line is supported by pi-portal pylons. Two additional 110-kv lines extend from Substation E, southwestward to Substations B and D.

A newly identified probably low-voltage powerline can be seen on the northern side of the main road leading to Reactor Area III. The terminal point of this line cannot be determined, but it does appear that it connects with the reactor area.

REFERENCES

[redacted]

DOCUMENTS

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2. NPIC. R-103/63, Kyshtym Atomic Energy Complex, USSR, [redacted] June 1963. (TOP SECRET [redacted])
3. NPIC. R-299/63, Reactor Area III, Kyshtym Atomic Energy Complex, USSR, [redacted], November 1963. (TOP SECRET [redacted])
4. NPIC. R-188/64, Ancillary Facilities, Utilities, and Transportation Networks, Kyshtym Atomic Energy Complex, USSR, [redacted] March 1964. (TOP SECRET [redacted])
5. NPIC. R-568/64, [redacted] Kyshtym Atomic Energy Complex, USSR, [redacted] July 1964. (TOP SECRET [redacted])
6. NPIC. [redacted] Kyshtym Atomic Energy Complex, USSR, [redacted] January 1965. (TOP SECRET [redacted])
7. CIA. PIR-73014, Water Facilities at Reactor Areas I and II, Kyshtym Atomic Energy Complex, USSR, October 1965. (TOP SECRET [redacted])

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